DOCUMENT RESUME

ED 065 380 SO 002 454

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TITLE A Behavioral Approach to the Teaching of Social Studies. An Application of Cognitive and Affective Process Models Performance Tasks and Criterion Measures.
INSTITUTION Washington Univ., Seattle. Tri-University Project in Elementary Education.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE May 68
NOTE 61p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Behavioral Objectives; Curriculum Planning; Elementary School Teachers; Learning Processes; *Methods Courses; Performance Criteria; *Preservice Education; *Social Studies; Student Evaluation; *Student Teaching; Teacher Behavior; Teacher Education Curriculum; Teacher Evaluation; Teacher Role; *Teaching Models

ABSTRACT

Described in this document is a schedule of teacher behaviors specified as being most appropriate for preservice elementary social studies teachers. Pre-teaching tasks are allocated to the social studies methods class; teaching-learning and post-teaching tasks to the student teaching experience. The tasks, stated in behavioral terms, are recommended terminal behavior criteria for teacher candidates. Pre-teaching tasks involve: 1) planning activities that increase the scope and body of social science content and methods and increase pupil performance in cognitive and affective skills; and, 2) planning activity sequence, transitions, evaluations, and multimedia resources. Elements of the teaching-learning process are: questioning, discussion, use of resources, teacher-pupil planning, cueing, and reinforcing. These are presented in two sections, one focusing on the teaching process, the other on the learning process. The final behavior group, post-teaching tasks, defines the behavior of the teacher in the evaluative role. Appendices referred to in the text are: Examples of Pre-Teaching Tasks; Example of the Teaching-Learning Processes; and, Synthesis Model of the Teaching Learning Process Related to its Sources. (DJB)

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A BEHAVIORAL APPROACH TO THE TEACHING OF SOCIAL STUDIES

AN APPLICATION OF
COGNITIVE AND AFFECTIVE PROCESS MODELS
PERFORMANCE TASKS AND
CRITERION MEASURES

SO 002 454

A Monograph Prepared by

THE TRI-UNIVERSITY PROJECT IN ELEMENTARY EDUCATION
(SOCIAL SCIENCE - SOCIAL STUDIES)

University of Washington
Seattle, Washington 98105

May 1968

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EDUCATION & WELFARE
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PREFACE

The ideas in this document were developed by the college post-doctoral participants in the Tri-University Project in Elementary Education (social science-social studies) at the University of Washington, Seattle, during the 1967-68 academic year. The project was supported by a grant from the U. S. Department of Health, Education, and Welfare, Office of Education.

The document addresses itself to those tasks deemed to be essential to the successful teaching of social studies in elementary school classrooms. It seeks to answer the question, "What must the beginning elementary teacher be able to do in order to teach social studies successfully?" The emphasis is ~~clearly~~ on teaching behavior. Moreover the document stresses that there are minimum ~~or criterion~~ levels of teacher behavior that discriminate between successful and unsuccessful teaching performance. We believe these ideas to be reflective of a significant new direction in the preparation of teachers in the social studies field.

In developing their ideas, the contributors assumed that the teacher in training will have other supporting work in education and psychology that will acquaint him with general concepts and procedures relating to elementary school teaching. Therefore, this document focuses exclusively on teaching the social studies. It does not concern itself with classroom management, discipline, the total classroom environment and other similar matters relating to teaching.

The authors also assume that learning to teach elementary social studies means working with pupils over an extended period of time. Some contact with pupils is necessary during the time the student is taking his methods course. This experience is enlarged during his

student teaching assignment. It is expanded still more during his first year of teaching. The authors insist that successful teaching of social studies will be enhanced if there is congruency in teaching performance expectations in all three of these experiences. This document should therefore be of assistance in establishing similar expectations in the methods class, in the student teaching experience, and finally on the job.

We present this document, then, as a first effort rather than as a final and finished statement of performance criteria. It is hoped, however, that others may profit from these ideas and, indeed, will be sufficiently stimulated by them to refine and extend what is presented here.

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May, 1968

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Introduction

In the preparation of teachers for the decades ahead, educators are able to draw upon tools that have emerged from the unprecedented attention education has received since the 1950's. Notable among recent developments has been the attempt to view the roles of teachers in terms of stated behaviors, specifically defined. Such materials as Bloom's Taxonomy have provided direction for stating behaviors in dimensions identifiable and measurable by the observer.

It is with this in mind that the following document was developed. The teaching of social studies has suffered in the past, it seems, from a lack of clearly stated behaviors deemed essential by the classroom teacher. The following assumptions and the tasks that follow, in turn, are viewed as a reasonable format to aid in the preparation of the elementary school teacher in his role as social studies teacher.

Assumptions

1. Teaching competencies of elementary school teachers of social studies can be stated in behavioral terms. Teaching competencies are those overt expressions, either oral or written, specific to the activities of a teacher prior to, during, or following contact with pupils in a learning situation. Behavioral terms as used here refer to those activities of a teacher that are observable and quantifiable. Further, any behavior used herein would have concensus among teachers (i.e.: a learning experience such as arranging for and conducting a group discussion would be readily identifiable as such by professional teachers.)
2. The description of behaviors expected from beginning teachers can be used as the criteria for terminal behavior on the part of candidates who have taken the methods course plus student teaching.

3. Once behaviors of the beginning teacher are described, they can be allocated between student teaching and the methods course. A sequence can be established. It would appear that the pre-teaching tasks will be allocated to the methods course, for the most part. The competencies represented in the teaching tasks and post teaching tasks will be demonstrated during student teaching. In some instances, (e.g. where an intern situation exists in lieu of an abbreviated student teaching situation) the teaching and post teaching tasks will be demonstrated by the intern during that phase of his preparation.

4. Teaching style is subordinate to the quality of pupil learning achieved.

5. The prime focus must be on pupil learnings and their effective learning strategies. Teaching strategies become the "structures" which enhance pupil learning--hence "teaching strategies" cannot be isolated and seen as an entity separate from pupil learnings.

6. The teaching task can be divided into three major segments--preparation for meeting the class (the pre-teaching task), working with pupils in the instructional setting (the teaching task), and analysis and evaluation of the experiences in the instructional setting (the post-teaching task). These re-cycle daily.

7. The methods course will require supervised first hand experiences with elementary pupils in the classroom (observation-participation, micro-teaching, etc.) to provide a reality base for pupil learnings.

8. Student teaching becomes an experience where integration of the learning from the methods course (theory and experience) becomes molded through the consecutive days with a specific group. This is seen as a counter-part to the medical intern going into residency.

9. The teacher as a student of education in a broad sense is a role deferred to a point after certification. The term <u>student of education</u>

refers to those aspects of a teacher's professional role not associated with initial preparation for instruction. It refers to post-graduate study involving such courses as those leading to an advanced degree.

PRE-TEACHING TASKS

Prior to actual classroom contact with pupils, the teacher must be able to perform certain planning and preparation tasks. Sound planning does not necessarily ensure good teaching. On the other hand, weak planning cannot result in strong teaching. Those essential pre-teaching tasks are described in this section.

I. Pre-Teaching Tasks.

A. Given a group of pupils for whom the teacher is responsible, he should plan learning experiences for the year that will increase the scope and body of principles, generalizations, models, and supporting data from the social science disciplines used by the pupils in their work.

1. Given topics or subject matter designated for the class or grade level, the teacher chooses appropriate high order generalizations from the social science disciplines (such as those found in the Merrill pamphlets, the California Framework, the Wisconsin Frameword, and the NCSS publication) around which to organize instruction. (See appendix, Pre-Teaching Task, item A)

2. The teacher formulates a group of lower order generalizations (child-size, or supporting statements, that would approximate what might be expected to come from pupils progressing toward the desired generalizations) that must be developed in the process of reaching the high level generalizations. (See B-1,2)

3. Given a group (list) of high order generalizations around which to organize instruction, the teacher identifies five to eight main ideas for the year's program that

a. Cut across the disciplines represented by the generalizations and b. Supply criteria for how far to go into what content. (See C

4. The teacher identifies the key concepts imbedded in each of the generalizations selected as well as for the lower order generalizations and the main ideas. (See D)

5. Given a group of five to eight big ideas (as per 3 above), each of which is to serve as the focus for several weeks of instruction, the teacher identifies appropriate content samples that will provide the contrast necessary for the development of these main ideas. (See E)

6. Given a group of five to eight big ideas (as per 5 above), with appropriate contrasting samples, the teacher identifies the appropriate cognitive skills to be developed, the academic skills required, the necessary social skills, and the attitudes to be fostered. (See Functions for F 1-22)

(Bare minimum for terminal performance)

7. For each of the main ideas the teacher is able to

   a. Indicate appropriate methods of inquiry to be employed for each set of examples, (See F 1-22)

   b. Select intervening experiences representing a variety of levels of abstraction, using Dale's Cone of Experience as a criterion measure, and (See F 1-22)

   c. Formulate an instruction sequence for each of the main ideas which will include rotations of the following:

      (1) Intake and expressive activities, (Intake: See F 2,3, etc., Expressive: See F 4,5,6 etc.)
      (2) Cognitive and inquiry skills, (See Functions for F 1-22)
      (3) Academic skills required, (See Functions for F-1-22)
      (4) Social skills necessary or desired, and (Implicit in grouping)
      (5) Attention to the attitudes to be fostered. (See F 19-20)

8. Given a course of study which provides 1 - 5 above, or a reasonable part thereof, the teacher modifies it to include the essence of 6 and 7.

(Miminum for Initial classroom Performance)

9. The teacher translates 1 - 8 above into statements of behavioral objectives for the pupils in his classroom. (See F 1-22)

10. The teacher provides alternatives to accommodate the needs of individual pupils for whom the original statements of objectives (9 above) are not appropriate. (See F 2&3,5&6, etc.)

11. Upon preparation of a unit of work or a specific lesson, the teacher specifies the evaluative criteria to be used and

    a. Prepare the appropriate instruments/materials to be employed for this purpose, being careful to (see F 7 & 14)

    b. Insure that it contains items distributed across levels of thinking (as represented by Bloom, Sanders, Taba, etc. and/or

    c. Ascertain that it includes devices appropriate for appraising the development of necessary "tool" skills.

B. Given a group of pupils for whom the teacher is responsible, he is able to plan learning experiences for the year that raise the level of pupil performance (over the initial levels which they display at the beginning of the year) in the cognitive skills.

1. The teacher plans experiences that will develop the ability on the part of all pupils to locate information on maps, globes, charts and graphs; in film strips and films; and from pictures and models. (See F 2,3,4 & 5, etc.)

2. The teacher is able to plan experiences that will develop the ability on the part of pupils, according to individual ability levels and in keeping with the nature of the materials available,

to locate information in encyclopedias, atlases, almanacs, newspapers and other periodicals, the card catalog, and in trade books and texts. (See F 2, 9)

3. The teacher plans activities for the pupils that will enable them and require them to interpret, analyze, and synthesize information from a variety of sources--oftentimes making inferences which go beyond the data, and frequently developing generalizations. (See F 5, 7, 8; 11, 12, 14, 15; 17,18,19)

4. The teacher provides a variety of models for organizing information in a form which facilitates interpretation, making inferences, comparison, and generalizing. (See F 4,11,19)

5. The teacher demonstrates his ability to do the following:

   a. Plan a variety of ways for helping pupils to apply their inferences and generalizations to novel settings; (See F22)

   b. Help pupils analyze their applications by examining the adequacy of support data (the relevancy to the task, the nature of the evidence--is it definitive? descriptive? logical inference? the source?): and (See F 23)

   c. Lead pupils to evaluate the credibility or feasibility of the application in terms of the geographical and cultural setting. (See F 23, 24)

C. Given a group of pupils for whom the teacher is responsible, he is able to plan learning experiences for the year that will raise the level of pupil performance in the affective skills.

1. The teacher plans activities that will encourage each pupil to do the following:

   a. Listen attentively to the contributions of others. (See F 19, 20)

   b. Respond to the content, rather than the person, with ideas of his own. (See F 20, 21)

c. Identify and present his own position, supported with firm data, with increasing clarity, conciseness, and thoughtfulness. (See F 19-21)

d. Reconsider, refine, and re-develop his position in the light of new ideas and/or discrepant evidence. (See F 19-21)

e. Make a conscious effort to be consistent in his treatment of similar problems couched in different settings. E.g. caste in India and caste in race relations in the U.S.

2. The teacher indicates a variety of techniques that can be employed to diagnose individual needs in the affective domain.

3. The teacher indicates a variety of techniques for providing individual help according to the needs indicated.

4. Given tapescripts of pupil discussions, the teacher summarizes and clarifies pupil viewpoints and positions. He is able to indicate how he might assume the role of devil's advocate in order to present unpopular viewpoints for class consideration

D. Given a group of pupils for whom the teacher has undertaken A, B, and C above, he is able to specify the sequence of learning activities and the form of analysis to be employed in evaluating pupil learnings resulting from them.

1. The teacher indicates the techniques that will be used to identify initial pupil status regarding new skills or content prior to their introduction.

2. For each assignment or task incorporated into the ensuing lessons (e.g. maps, charts, notebooks, artwork, etc.) the teacher stipulates the performance criteria to be employed.

3. For each assignment or task the teacher indicates how individual needs will be diagnosed and incorporated into subsequent planning.

E. Given a group of pupils for which the teacher has undertaken A, B, C, and D above, he is able to specify the appropriate learning resources, including multiple media. Where they are not available, he is able to develop them as needed.

1. The teacher chooses from the learning resources (multiple media) available those which will best facilitate the pupil learnings he desires.

   a. The selection provides for individual difference in learning style.

   b. The teacher is able to create, or direct the pupils' so that they can create, those materials needed but not available.

2. The teacher states the criteria upon which the selection of the media was based, e.g.:

   a. The developments of content is handled better than in other resources.

   b. The data it contains is more up-to-date than that of the text.

   c. The media chosen does a better job in less time than that required by other materials available.

   d. No other materials of suitable nature were available.

3. The teacher specifies the criteria to be used in measuring pupil learnings following the use of the media selected.

4. The teacher organizes the learning environment in such ways as to facilitate the kinds of activities desired.

   a. He arranges equipment in the classroom so as to facilitate the desired learnings.

   b. He provides for pupil arrangement and re-arrangement (flexibility) in order to accommodate the learning activities taking place.

F. The teacher is able to build bridges between lessons and between units.

1. He employs the evaluation of the previous lesson(s) in making the plans for subsequent lessons.
2. He provides for individual differences at this time.
3. He insures that subsequent lessons build on the learnings of those taught previously.

G. The teacher is able to incorporate the examples from the Teaching Task materials into his planning as he translates A - E above into classroom performance.

Note: See Appendix for Post-Teaching Task for other evaluating materials.

PART II

THE TEACHING-LEARNING PROCESS

Teaching Behaviors

1. Questioning
2. Discussion
3. Use of Resources
4. Teacher-pupil planning
5. Cueing
6. Reinforcing

The Teaching-Learning Process

Introduction

The general assumptions made in the preceeding section are also implied here.

In this section teaching and learning are viewed as two sides of the same coin. Two paradigms, however, have been developed. One focuses upon the teaching process (pink pages), singling out such common phrases as motivation, presentation, development, summary, and application. The other model focuses upon various cognitive and affective processes in children's learning (yellow pages). These processes are a synthesis of the learning processes or tasks developed by Taba, Suchman, Michaelis and others. Further details are given in Appendices C, D, and E.

A number of specific teacher behaviors or competencies have been identified. These include questioning, discussion, cueing, reinforcing, use of resources, and teacher-pupil planning. While the list is not exhaustive these behaviors are viewed as important technical skills or competencies that a teacher must be able to demonstrate. To avoid their becoming a mere "bag of tricks" if developed in isolation the behaviors have been defined and illustrated in the context of the two related para digms of teaching and learning. Additional behaviors could be developed in the same way.

The paradigms or models may be used in several ways depending upon one's objectives. The teaching-process model lends itself well to large group instruction, demonstration, or lecture situations. The learning-process model is appropriate to problem solving, inquiry, discovery, or discussion situations. As the instructional requirements vary, elements may be selected from either of the paradigms and used as appropriate.

As in the previous section the behaviors or competencies are written as behavioral objectives, using readily observable terms as measures of performance. A number of specific illustrations are given for each aspect of the two paradigms. Detailed teaching plans showing the use of these behaviors in the context of a series of lessons are included in Appendices A and B. Video tapes have also been developed to illustrate several of the lessons.

QUESTIONING
(Focused on the Teaching Process)

Teacher Behavior #1
(Competency)

The Teacher is Able to Ask Questions that Result in:

Motivation	Presentation	Development	Summarizing	Application
Teacher asks questions to arouse interest, Poses a problem, asks a rhetorical question. 1. Why do you think the early pioneers wanted to move westward? 2. How do you think we could solve the problem of urban slums? 3. Teacher begins an inquiry approach with a "mystery question."	The teacher asks questions at the knowledge level: who-what-when-where? Teacher is able to clarify data. Asks questions that bring out basic knowledge. Asks questions to locate/and or determine the limits of the problem. Questions for review.	The teacher asks questions to clarify. Asks child to interpret his own statements, or oral statements of others. Asks questions of Application, Analysis, Synthesis --- Poses questions in the Affective domain to focus on values. Asks If-Then questions consistent with stated values - (alternative-consequences)	Teacher asks questions to summarize. Uses questioning to review by recall questions basic facts, relationships and and analyses and syntheses mode.	Teacher is able to use questions for appropriate activities (homework-test projects, etc.) that require a student to apply the knowledge, skills, attitudes to new situations

DISCUSSION
(Focused on the Teaching Process)

Teacher Behavior #2

The Teacher is Able to Guide a Class Discussion that Results in:

Motivation	Presentation	Development	Summarizing	Application
The teacher can relate peer dynamics to the use of discussion. A. The need to belong and acceptance are recognized by making sure that each child can and does contribute to a discussion. B. Uses group problem solving techniques. C. Organizes groups based on interests, ability, sociomentric choice, etc. Teacher presents dissonance models to encourage discussion. These situations are designed to emphasize novelty, curiosity and the need for closure. A. The mystery model. What happened here? How do you explain this? What is the evidence? B. Teacher presents ideas, activities, etc. that have not been a part of the school routine.	The teacher presents and proposes rules for discussion. The uses of discussion are presented in various forms: A. Debate or formal structures. B. Role playing situations i.e. court scenes, historical debates, discussions carried on in Congress, etc. C. Discussions used for social and pleasure situations.	Discussion can and is used in teacher-pupil planning. The teacher can help the child by encouraging more discussion on his part in the teacher-pupil planning situation. The teacher keeps records of the extent of participation of each individual in two or more discussion situations.	The teacher uses many oral situations to use discussion to summarize projects, units or activities. Oral discussion is used in many evaluative situations. The teacher allows for compentencies to be developed in the discussion situations since not all children are "at home" in this situation.	The teacher points out and develops situations which children can apply discussion. Children are able to anticipate the kinds of situations in which the analytical and logical discussion would be of help. A. The use of "games" in social studies that stress problem solving. B. Committee panel that discus the several points of view of various issues. C. Discussing the values of solution already made in selected situation.

TEACHER BEHAVIOR #3

USE OF RESOURCES
(Focus on the teacher process)

The teacher is able to handle resources that result in:

MOTIVATION	PRESENTATION	DEVELOPMENT	SUMMARIZING	APPLICATION
Teacher uses a film, filmstrip, bulletin board, etc. to set the stage as a starter or initiation. Teacher constructs a large floor map of the community. Teacher uses overhead projector, pictures, models to introduce a unit on space, astronomy. Teacher uses story in trade books to create interest.	Teacher uses chalk board, bulletin board, flannel board to show sequential order. Teacher uses filmstrip to show steps or process in detail (e.g. building a log cabin, making butter). Teacher uses a picture graph to show leading producers of dairy cattle. Teacher uses a film to add understanding and information during the development of a unit. Teacher uses overhead projector and overlays to compare one area with another. The teacher uses pictures to raise questions and present problems.	The teacher uses a map to study the community. The teacher uses pictures, books, films, filmstrips, records to prevent and correct misconceptions relative to dress, homes, villages of people. The teacher uses bulletin boards, chalk boards, flannel boards to show progress of unit; process-stages in making a particular activity, recording or tabulating of opinions. The teacher uses filmstrip to develop one or more skills. The teacher uses graphics to compare two or more values from a graph. The teacher uses films, textbooks, trade books, programmed material to provide information in a variety of ways.	The teacher uses bulletin boards, chalk boards, flannel boards to summarize a field trip, list of items, group reports. The teacher uses films, to summarize, reinforce, or as a check-off of information and understandings as one of the concluding activities of a unit. The teacher uses overhead projector and overlays to show outline of completed project. The teacher uses pictures to show relative size, e.g., men, camels, pyramids. The teacher uses books, trade books, programmed material, recordings to provide different types of summaries.	The teacher uses pictures to assist pupils in developing critical judgement. The teacher uses filmstrips and films to encourage further research, to involve the students in critical thinking. The teacher uses the overhead project and an acetate roll to show boundaries and territories of newly emerging nations, territorial expansions, comparisons.

TEACHER BEHAVIOR #4

TEACHER-PUPIL PLANNING

(Focused on the Teacher Process

The teacher is able to make plans with pupils that result in:

MOTIVATION	PRESENTATION	DEVELOPMENT	SUMMARIZING	APPLICATION

CONSTANTS

When planning with pupils a teacher must:

1. Allows time for thinking and exploring.
2. Has a high tolerance level for silence after a question.
3. Listens to and observes children with care.
4. Talks with children, not to them.
5. Builds his comments upon those of the pupils.
6. Displays an evident and felt concern for the group and individuals.
7. Encourages pupil to pupil interaction.
8. Elicits contributions from the less verbal - when appropriate.
9. Limits contributions from the more verbal - when necessary.
10. Proceeds within the limits of their ability to plan.

MOTIVATION	PRESENTATION	DEVELOPMENT	SUMMARIZING	APPLICATION
Teacher encourages the discovery of problems Teacher accepts children's ideas Teacher reflects pupils' feelings Teacher solicits negative as well as positive points of view Teacher anticipates directions children will take	Teacher summarizes Teacher clarifies Teacher expands Teacher includes essentials the children forget Teacher eliminates the impossible Teacher sets limits on some tasks Teacher provides some resources	Teacher asks questions broad to narrow Teacher gives information Teacher gives opinion Teacher includes essentials Teacher eliminates the impossible Teacher sets limits on some tasks Teacher plans for best physical setting Teacher encourages individuals to take leadership	Teacher plans so children will be able to see the results of their work Teacher anticipates directions whilcren will take Teachers and Pupils Plan: How to close the study How to share the knowledge The form the summary will take For additional activities for individuals who desire to pursue the topic further	Teacher anticipates directions children will take Teacher plans ways of providing children with a feeling of accomplishment Teacher plans a smooth transition to the next unit Teacher and pupils plan: The culminating activity procedures To make decisions To pass judgements

MOTIVATION	PRESENTATION	DEVELOPMENT	SUMMARIZING	APPLICATION
Teacher & pupils Plan: How to proceed with the new topic Ways to relate new studies to other experi iences What causes . . . What can we do to find out? You seem puzzled by . . .	Teacher and pupils Plan: To form focus-set goals To find sources of information To decide how to attack the problem Teacher relates various pupil responses What do you need to know to answer the questions you asked? Have we listed all the important questions? Where shall we start? Will our plans lead us to a well rounded picture of our subject? Are our questions thought provoking and worthy of our attention? Can some questions be answered by individuals?	Pupil and Teacher Plan: For the social studies class To find additional sources of information and to use them To make decidions and judgments as to priorities-which problems are most important Teacher adds new information to pupil responses Which experiences will: (1) give us the best information (2) can be accomplished in the time we have? Can you think of other sources of information? Let's see how we can best spend our time today. You probably have suggestions for organizing the information you are gathering.	Let's try to pull things together. How would we proceed if we had to write someone and tell him the important things we learned in this unit?	To improve future planning sessions Appropriate out of school use of the new information and/or abilities Do you have suggestions for sharing your new knowledge with others? How can we tell if we really understand the topic we have been studying? Let's make sure we have considered all the alternatives and their consequences. How might we have improved our planning for this study?

CUEING
(Focused on the Teaching Process)

Teacher Behavior #5

The Teacher is Able to Use Cueing that Will Result in:

Motivation	Presentation	Development	Summarizing	Application
You will be interested in. . . You want [illegible] come able to. . . so [illegible] ink you will like this. You were absent yesterday, but I think you can figure out an answer to this. Yesterday we. . .What do you think? Use analogy that has characteristic similar to the concept or theme of lesson. Shift sensory channels or vary style of teaching.	Cue student 5-10 minutes ahead so student can find of think of answer. Do you understand what you are to do? How does this relate to what you did? I think Group A will find . . . interesting, Group B will like. . . Group C will find much challenge to solve. . . One example is. . . Can you think of another? You said earlier(last week, on playground, in paper, etc), Have you more ideas on this? Use several frames of reference. (i.e. from Northern white, Negro slave, free Nego, etc.,European leader.)	Did the materials' give you any ideas? You mentioned you didn't quite understand this. Let me state it in a different way. Can one of you restate... so we will have another way to look at statement. Quote data, etc. Some problems you might have include... but I think if you... you can handle. You are especially good at finding clues from pictures, would you..? Repeat...Pause...Go on (Use literal repetition and figures of speech. Emphasize verbally one word or part.	Cue student 5-10 minutes in advance so student can prepare his contribution. We found. . ., can you think of something else? Who wants to check film or books etc. to see how others summarized? Would you like to work with A so you can come to some conclusions on? Give an example of... that uses our findings from. . . Highlight visually. Tell me more. Can you tell others what you mean in a different way? Can you explain...?	What do you think of what we have done? How do you plan to use it? What do we need to change? Do you have other ideas? Did you check with other materials? Can you justify that response? Can you cite other examples? How would you respond to Dick's statement? How would you use data? Is this suited to...? How ms this important?

Organizes materials in appealing ways. Were you ever curious about...? Do you want to find out more about...? Show film, play record, etc. to review what studied so far.	Make a statement. Pause a long time to give student time to think about it. Do you remember answer to. . . Define words or concepts. If. . . then what, why, etc.? Can you think of a related problem we studied? What startled you, was ususual, made you think, "Oh, my goodness." in movie? Do you remember how we talked about . . .?	Ask questions in small steps as in program. Give hint of answer. Give clue to answer. Steps 1,2,63 are... What's next? Does that answer the question? Is that on this subject? Clarify by: Let's look again at. . . That's possible. Hmm...Very interesting (TV quotes) Remember now, we were talking about... Let's not get this confused with. . . Now think carefully. . . Is that actually . . .? Let's get back to the original question (state question again) You have said. . . How would this affect ... ? We talked about. . . What do you think would occur if . . .? Now that we have listed all the . . . we can think of, let's try to list. . . Such as?	Clarify by com comparison or contrast. Then ask student to tell in one (limited) sentence idea. You did. . . Tell or draw or act to show meaning. Can you act out what was said? Can you make a chart from what you have found? What stood out for you--something that happened in movie? Now I'm asking you-listen again--in the movie you just saw what. . .? What do you have to say about that?	You can do more Can you think of a different but similar idea? (Example, etc.) What can we do with these things?

REINFORCING
(Focused on the Teacher Process)

Teacher Behavior #6

The Teacher is Able to Use Reinforcing in a Way that Will Result in the Use of Valid Reinforcements for Producing:

Motivation	Presentation	Development	Summarizing	Application
You were successful when you attempted this recently so... You expressed interest in . . . I think you can. . . Make mental notes of what each child says for future leads. . .	Show enthusiasm for... If. . ., you can do...	"Yes, that's the correct answer" (plus two variations) I like that-- You have gotten off to a good start. I especially like. . . Smile, frown, facial expressions. Bodily posture. Unhm, Right. Partly right. Ask question you know student can answer correctly. Did you hear Tom's remark? Listen to what Tom has said again. Sue tells me you are doing a fine job. Judy tells me you contributed . . . idea to group.	"John or Group I suggested that . . . Mary, you look as if you understand the concept or idea well enough to explain it to others. Listen to John's theory. Do you agree? Disagree? You can record this for others to use. Well, that's an interesting idea, John. If student attacked by peers, teacher says "Well that's something we all need to work on."	Wasn't that an interesting idea? (Pause) I believe you can figure out . . . (predict, differentiate, etc.)

		Encourage students to say "I didn't understand that. Could Jim explain what he means? Does anyone have a different idea? (Student then hear correct response.)	Tell joke to release tensions so can think anew. I see.	You certainly could do this. . .
Billy really knows. . . We can be proud of . . . Paul, this is one point we haven't touched on.	I'd be happy too, if that happened to me.	That's fine, good, weak, all right, part of it true, etc. Yes, no. Approve, criticize, correct, amplify student's responses I like the way (Jane, Group A) is . . . Of course you feel disappointed because. . . No wonder you feel sad. Where did you ever get <u>that</u> idea? I said to. . . We shouldn't . . . Where do you think you are? Go on. Now, this is a good point.		

TEACHER BEHAVIOR # 1
(Competency)

QUESTIONING
(Focused on the Learning Process)

The teacher is able to ask questions that result in:

I Determining the Focus	II Concept Formation	III Generalizing and making inferences from data	IV Valuing for policy making-identifying values, priorities alternative courses of action	V Application	VI Analysis and evaluation	VII Selecting a policy consistent with values of highest priority
The teacher asks questions to help initiate a unit or a short series of lessons. To determine the focus for study, the teacher may ask questions to pose the problem, analyze the setting, or identify the task. e.g. 1. What can we do about unemployment as more and more factories become	Concepts (e.g. division of labor, scarcity, democracy) are abstract words or phrases that are useful for classifying events or ideas. Concepts are both the working language and the tools of investigation in social studies. Teachers can help children learn to form	Generalizations are brief statements that summarize large amounts of data gathered by the students. They express a relationship about one or more concepts. To develop generalizations. The teacher asks questions in which children (a) compare and contrast data from different samples (differentiation), (b) interpret the meaning of	Before a policy decision can be made, alternating courses of action must be identified and a priority of values established as a framework for making choices. The teacher asks questions by which children (a) identify alternative courses of action, (b) identify attitudes, beliefs and values, especially conflicting ones in the data, (c) infer value positions for different samples, (d)	To complete a problem-solving task children must be able to apply generalizations and principles to existing or new situations. The teacher asks questions that elicit the effects of alternative actions and their possible consequences. Children	Children examine critically both the process and the product of their work. They make a logical analysis of the hypotheses that were formulated, the evidence used, and the conclusions drawn. They evaluate the conclusions or solutions by reference to criteria which they have	As a final step in the policy-making move, children select the "best" from among several possible alternative courses of action. This choice is guided by and is consistent with the values of highest priority expressed in Task IV, Valuing. In this process students may shift back to previous steps to re-assess previous decisions. 1. Which alternative shall we select? Why? 2. Is this the best possible choice

automated?

2. What factors may account for the poor harvest of fish in the North Pacific during the past few years?

3. How shall we celebrate George Washington's birthday?

concepts by asking questions which (a) summarize their observations; (b) help identify common properties or criteria for grouping, and (c) label or define the grouping.

a. Observation
1. What did you see? Note? Find?

b. Grouping or Classifying
1. What belongs together?
2. On what criterion?

c. Labelling or defining
1. What would you call these groups?
2. What belongs under what?
3. How would you name or label this?

certain data; (c) make reasonable inferences based on the data itself, and (d) develop a generalization.

(a) Comparing and contrasting (Differentiating)
1. What did you note? See? Find?
2. What things are the same? Different?
3. How can you distinguish among things partly the same and partly different?

(b) Interpreting Data
1. What does this mean?
2. How does it relate to other things?

(c) Making Inferences
1. What can you infer? Imply?
2. What does the data suggest?

(see next page)

arrange value positions into a set of priorities, and (e) analyze alternatives for consistency with stated value preferences and the priorities established.

e.g. 1) What other things might Sam Adams have done?
2) What other solutions are possible?
3) What else would be possible?
4) How would you describe Roger Williams attitude?
5) How do you feel about this solution?
6) What did the mayor do that made you think he considered (valued) parks as more important than a new airport?
7) Based on the speech by the president of the Chamber of Commerce, what do you think he valued most?

(see next page)

hypothesize. 1) What would happen if...? 2) What alternatives are available? 3) What are some possible consequences?

Children are able to explain and/or support their predictions and hypotheses. 4) "Why do you think this would happen?"

Children are able to verify their prediction using logical, factual, or inferential evidence 5) What would it take for this solution to be generally true or probably true? 6) What evidence can you cite? 7) What evidence will you need to gather?

developed themselves, or which are provided by the teacher or from other sources.

a. Discriminates Kind and Extent of Evidence
1. What is the nature of the evidence? Facts? Inferences? If-then propositions?

b. Appraisal of data, size of sample, logical reasoning
1. Is the position supported by data?
2. How many (how large) were the samples?
3. Does the syllogism hold?
4. Is the conclusion likely, possible?

c. Evaluation
1. Have we developed a set of criteria?
2. How well

(see next page)

3. Does it agree with the values we listed yesterday?
4. Do we have to modify or revise our solution to make it agree with the highest value we have listed?
5. Is it possible to work out a compromise that most people would agree to?
6. Would the compromise still be in agreement with the values we listed?

TEACHING BEHAVIOR #1 (continued)

QUESTIONING

I	II	III	IV	V	VI	VII
		(d) Developing Generalizations 1. What can you conclude?	8)Which of these attitudes or values is the most important? The least important? Why? 9) How did you decide on this order of priorities?		does the solution or conclusion meet the criteria? 3. Does the proposed solution meet the criteria established by the federal government for urban renewal programs?	

TEACHER BEHAVIOR # 2

DISCUSSION
(Focused on the Learning Process)

The teacher is able to guide a class discussion that results in:

I Determining the Focus	II Concept Formation	III Generalizing and making inferences from data	IV Valuing for policy making-identifying values, priorities alternative courses of action	V Application	VI Analysis and evaluation	VII Selecting a policy consistent with values of highest priority
The teacher organize and/ or guides the discussion of children so that they bring their discussion to the point of identifying the problem, the idea, the theme, etc. A. The teacher asks questions of clarification. 1. Do you think this is the important problem? 2. Does your statement help to define the main problem	The teacher guides children's discussions for the purpose of listing and categorizing. A. Using experience and/or data retrieval charts children discuss the possible ways of categorizing the data. B. Using data derived from t the use of library re= sources the child through discussion, with one or more other	The teacher organizes the learning environment so that children discuss the possible inferences from data. The teacher varies data that children discuss so they may see that different conclusions may follow if the conditions of the data change.	The teacher guides children in preparing problems and situations in which values can be identified and discussed. Discussion is encouraged which deals with the priorities of values and the solution of problems in which alternative values may be considered. A. Uses examples from history in which the causal values were not too apparent or controversial. B. Considers problems that may arise in the class. Discussion emphasizes the analytical process of valuing.	The teacher encourages discussion of a problem in both the classroom situations and the life space situations of the children. Children discuss possible, probable applications to new situations.	The teacher guides children's discussions in the analytical and/or evaluative mode. Current problems could be analyzed and evaluated for the following purposes: Class Discussion 1. To determine causal factor(s). 2. To determine if the event was reported in an objective waY. 3. To evaluate problem in terms of children's criteria, or other criteria.	The teacher should encourage situations in which discussion of children is focused on the development of a policy. Children, through discussion, should gain experience in planning policy that could be followed in a real or hypothetical situation. A. Children are able to develop policies through discussion that would guide their behavior in the classroom. B. Discussion centers on choice of alternatives and the related values.

or idea? 3. How many of you understand what we are trying to do? B. The teacher tries to determine if the children perceive the focus of the problem.	children, is able to organize, categorize, and label or define the data.	C. Creates hypothetical situations in which values and situations can be changed. Children can make decisions using these situations. D. Uses a more formal debate format to encourage discussion of current issues. Children are aware of conflicting values.

TEACHER BEHAVIOR # 3

USE OF RESOURCES
(Focused on the Learning Process)

The teacher is able to handle resources that result in:

I Determining the Focus	II Concept Formation	III Generalizing and making inferences from data	IV Valuing for policy making-identifying values, priorities alternative courses of action	V Application	VI Analysis and evaluation	VII Selecting a policy consistent with values of highest priority
Through the use of films, filmstrips, globes show, indicate, provide. Through the use of weather maps, relief models, pictures identify locate, point out, trace Through the use of textbooks, trade books, records introduce, present, establish or clarify Through the use of pictures, bulletin boards, overhead projectors introduce new topic	Through the use of maps, charts, globes, show relationships, locations Through the use of films, filmstrips, textbooks, trade books, children can enumerate, list, group, label and categorize From bulletin boards, chalk boards, flannel boards, pupils can differentiate, identify, determine hierarchical order of items	Through the use of films, filmstrips, tape recordings, make inferences, determine causes, find implications Pictures, bulletin boards, chalk boards, flannel boards can assist in identifying p points, explain items of identified information, assist in extrapolating, determine causes	Through the use of tape recordings, books, trade books, pupils can discuss materials, explore alternatives, set priorities Films, filmstrips, pictures, graphics will provide pupils with visual materials to assist in exploring alternatives, setting priorities	Maps, globes, charts may be used with pupils to verify prediction, predicate consequences, and hypothesize Bulletin boards, flannel boards, chalk boards will aid pupils in using logical principles and verifying predications	Tape recorders, records, pupil-made pictures, overlays on overhead projectors can be used in the process of analysis and evaluation	Chalk boards, bulletin boards, flannel boards class constructed graphics, pictures would assist pupils in visualizing those activities growing out of decisions and/or judgments which have been made

TEACHER BEHAVIOR # 4

TEACHER-PUPIL PLANNING

(Focused on the Learning Process)

The teacher is able to develop plans with pupils that result in:

I Determining the Focus	II Concept Formation	III Generaliz ing and making inferences from data	IV Valuing for policy making-identifying values, priorities alternative courses of action	V Application	VI Analysis and evaluation	VII Selecting a policy consistent with values of highest priority
By asking questions that interest, challenge, intrigue. By using inquiry procedures to gain or give information relative to planning. By channeling goals toward the possible Be guiding away from the impossible. By using pupil ideas, needs, and direction insofar as possible. By soliciting positive and negative points of view.	By planning the use of materials, information, resource persons, and field experiences for observing or gathering data. By eliciting responses from all pupils in labeling and grouping. By planning for the location and use of further materials and sources of information for clarifying observations.	By planning ways to record the data e.g. data retrieval charts. By planning methods for sharing information with others. By showing the relationship between various pupil responses as generalizations are developed. Let's try to find a way to organize this material so we won't forget it or lose it. How could we organize our data so it is most useful? How can we present the data so that we can compare it with what Sue's group has found out?	By projecting use of ideas and weighting of data. By exploring plans for valuing, feeling, and responding to data. By planning for a change of direction should time or data change, or some unforseen need arise. By using role playing to explore plans and alternatives before taking action. By discussing why they feel as they do and planning ways to find out what led to this feeling. Why do we feel this way? Is there any way to find out what causes our feelings to be what they are? Let's make believe and try to act as...	By planning ways to test out applications in new situations. By planning the use to be made of the data-in school and out of school situations. By helping pupils to determine the directions that the application of the data will lead them.	By planning useful and acceptable methods of assessing the conclusion or solution found. By agreeing on procedures and practices related to evaluation. By dividing responsibility for evaluation according to group and individual aptitude. Do you have any suggestion as to how we might evaluate these things? What criteria will we have to consider before we make this decision? - pass judgment?	By assessing resulting values from previous planning session and making individual decision concerning values and valuing. By planning for activities which grow out of decisions and/ or judgments which have been made. Are we sure this is the thing to do? How might we double check in order to be sure.

By helping the children formulate their questions. By providing some sources of information with which children can begin their planning.	or redefining grouping or labeling.	would act in such a situation. What will we need to do this?

TEACHER BEHAVIOR # 5

CUEING
(Focused on the Learning Process)

The teacher is able to use cueing statements that result in:

I Determining the Focus	II Concept Formation	III Generalizing and making inferences from data	IV Valuing for policy making-identifying values, priorities alternative courses of action	V Application	VI Analysis and evaluation	VII Selecting a policy consistent with values of highest priority
-You will be interested in -You want to become able to...so I think you will like... -Were you ever curious about...? Do you want to find out more about..? -Do you understand what you are to do? How does this relate to what you did? -I think Group A will find...interesting, Group B will like...,	-Use analogy that has characteristic similar to the concept or theme. -Cue student 5-10 min. ahead so he can find or think of answer. - Do you remember answer to.. -Define words or concepts. -You are especially good at finding clues from pictures. Would you..	-You were absent yesterday, but I think you can figure out the answer to this. Yesterday we... What do you think? -You can do more -If...then why, what, etc. -Can you think of a related problem we studied? -Today, let's see whether we can list all...that... -Now that we have listed all..., let's try to list.. --Give me an example of...that uses our findings on... -Clarify by comparison or contrast. Then ask pupil to tell in	-Can you justify that response? -How is this important? -One example is... Can you think of another? -You said earlier... Have you more ideas on this? -What startled you, was unusual, made you think, "Oh, my goodness." Why? -Now think carefully, is that actually...? -You have said...How would that affect...? -How many feel...? Raise your hands. -Can you tell others what you mean in a different way? -What would happen if ...? -Hmm, very interesting. (teacher quotes...)	-Shift sensory channels or vary style of teaching. -Can you cite other examples? -How would you use data? -Can you think of a different but similar idea? -That's possible. -We talked about ...What do you think would occur if...? -That's something different again. -Bill asked question... What would you ...? -I want you to follow up..	-Do you have other ideas? -Did you check.. with other materials? -How would you respond to Dick statement? -What can we do with these things? -Can one of you restate...so we will have another way to look at data? -Does that answer the question? -Let's get back to the original question. (State question again.) -Are you saying ...? -We found...Can you think of something else?	-What do you think of what we have done? How do you plan to use it? -What do we need to change? -Is this suited to...? s -Did the materials give you any idea? -Some problems you might have are...but I think you can handle. -Well, let's see what we have said. -Good point, are there other thoughts on this? -Class, what do you think of that? -What do you have to say about that...? -In other words, why...? -Let's look again at...* -Show film, play, record, etc. to review what studied so far.* -Can you explain?* -Repeat...Pause.Go on. (Use figure of speech.)*

Group C will find... challenging. -This morning many of you wondered if... -Is that on this subject? -Let's look again at... -Remember now we were talking about ... Let's not get this confused with.. -Would you like to work with A to find..? -Emphasize one word.*	-Such as? -Would you like to give us an example? -What does it mean? -What did you note? -You did--- Tell or show or act to show meaning. -Can you make a chart of what you found? -What stood out for you in movie? -Let's put that in a briefer form. -We could just write down word that...	one sentence idea. -What differences did you see? What is similar about differences? -Make statement. Pause a long time.	-Use several frames of reference as free Negro, Negro slave, etc. -Tell me more.*	-Who wants to check book, film, to see how others -What do you see?* -Do you remember how we talked about...?* -Ask questions in small steps as in programs. -Step 1,2,3 are ...What is next?*	-Sue would you briefly tell us points covered? -We've already said...* -Clarify* -You mentioned you didn't quite understand... Let me state in a different way.* -Highlight visually.*

*Behavior can be used in nearly every column.

TEACHER BEHAVIOR #6

REINFORCING
(Focused on the Learning Process)

The teacher is able to use reinforcing statemenst or questions tc stimulate or alter pupil behavior that will result in:

I Determining the Focus	II Concept Formation	III Generalizing and Making Inferences from Data	IV Identifying values, priorities, alternative courses and action	V Application	VI Analysis and Evaluation	VII Selecting a policy consistent with values of highest
-Paul has mentioned a point we have touched on.. State point. -You expressed interest in... -I think you can... -Make mental notes of what each child says for future lead ins. -Approve, criticize, correct, amplify pupil's responses. -Isaid to...	-You have gotten off to a good start, Sue; I especially like... -Yes, that's the correct answer. -Ask question you know student can answer correctly. -Does any-one have a different idea? (Student then hears correct response.) -Billy really knows... -Yes, no, uh hm, right.	-John (or Group A) suggested that... -You have gotten off to a good start. I especially like... -Paul, this is one point we haven't touched on. -Where do you think you are? -That's fine, good, weak, all right, part of it, or true, etc. -Use smile, frown, facial expressions, body posture.	-Well, that's an interesting idea, Jane. -Now that's a good point. -Listen to what Tom has said again. -You can record this for others to use. -If pupil attacked by peers, teacher says, "Well, that's something we all need to work on. Of course you feel disappointed because... -No wonder you feel... -Where did you ever get THAT idea?	-Wasn't that an interesting idea? -If...you can do.. -Judy tells me you contributed.. idea to group. -Mary, you look as if you understand the concept or idea well enough to explain it to others. -You certainly could do this. -Go on. -Teacher tells joke to release tensions so pupil can think anew.	-Did you hear Tom's remark? -Encourage students to say, "I didn't understand that. Could Jim explain what he means?" -Listen to J's theory. -Do you agree? Disagree? -I believe you can figure out.. (predict, differentiate, etc.) -Now this is a good point. -Partly right. -I see.	-If you...you could do this. -You were successfull when you attempted this recently. -Sue tells me you are doing a fine jobd -I'd be happy too if that happened to me. -We shouldn't... -We can be proud of. -I like that!

POST-TEACHING TASKS

The focus in this segment is on the post-teaching tasks that the teacher is expected to perform following the teaching-learning act(s). The tasks define the behavior of the teacher in an evaluative role; one in which there is analysis and evaluation of teacher and pupil experiences in the instructional setting.

For each of the tasks an illustrative example is given to further clarify teacher behavior. Specific acts the teacher can perform are suggested but there is no intent to sequence or structure the tasks or the acts stated in the examples.

ON THE COMPLETION OF A UNIT OV WORK OR A SPECIFIC LESSON:

1. The teacher selects and/or develops an evaluative instrument or activity designed to measure how well behavioral objectives have been achieved by the pupils.

   In view of the objectives stated the teacher studies measurement instruments of all types and compare them with performance activit.es to determine which would indicate most about the progress made. The instruments and activities include role playing, oral reporting and construction activities or teacher-made and standardized tests. The teacher must know how to administer and appraise each.

2. The teacher compares pre-instructional pupil behavior with post-instructional behavior to assess the levels of specific attitudes, understandings, and skills.

   Following instruction, the teacher looks for changes in attitudes including rapport with other students. changes in opinion or the use of supporting evidence in discussions. When the teacher determines that understandings and skills are adequate, he takes note of applications in a variety of situations apart from the social studies class. Additional indications might appear in listening to others seriously, in fair play and in the level of operation.

3. The teacher evaluates pupil thinking to determine the extent to which it has been enhanced by instruction.

> After careful study of the pupil's questions and statements in addition to his deliberations, the teacher may find that the student is performing at the knowledge level only. He then plans activities that require varying levels of thought such as analysis, evaluation, syntheses and interpretation. It may be necessary at times to teach the thinking process directly to the advanced student.

4. The teacher reviews the media and other instructional resources used during the unit and lesson and determines the effectiveness of each in relation to stated objectives.

> If the teacher uses the recommended variety of media and materials, he is in a position to make some comparisons regarding their relative effectiveness. Should he find that only part of a film, tape or book was effective in terms of time spent, he plans to use only that part in the future. In teaching map or reference skills, notes are made regarding the most effective media for the entire group and for individuals. These will be carried over for future use.

5. The teacher is able to identify the major elements of that lesson or unit and trace the development in terms of the stated behavioral objectives.

> The teacher may find that the discussion did not center around the intended topics. Those elements of the lesson are reviewed to determine the reason and whether the unintended direction was less effective. Any time the development of the lesson does not result in meeting the objectives an analysis should indicate the reasons and point to a clarification.

6. The teacher conducts individual conferences with the children for the purpose of helping them see strengths and weaknesses and for planning follow-up activities that will help (1) take advantage of strengths and (2) overcome specific deficiencies.

> The pupil is even more concerned than the teacher about his personal development, even when he denies it. Care should be taken to direct the pupil individually to recognize both successes and failures or strengths and deficiencies. Then a program of extension and correction can be planned. After the child has recognized that he is haveing difficulty with interpretation

of map and globe information, specific exercises are planned for him to overcome this deficiency. The child who has a firm grasp of process and content can be encouraged to participate in further activities such as analyzing a news event.

7. The teacher conducts group critiques for purposes of helping them evaluate individual and group work.

How does the group react to the contribution of individual members, and how do they feel about the total accomplishment? A concerted look at the product in view of the goals and purposes will help answer both questions. The maximum use of resources and time may return a great deal more; if pupils work in small groups or individually on different tasks for a time. On still other occasions a short concerted effort of the entire group can save time and be more productive.

8. The teacher graphically analyzes the interaction patterns that occurred.

Occasionally the teacher keeps a tally of individual pupil participation and may even make documented anecdotal records of some. Recording an entire social studies session affords an opportunity to use an interaction analysis such as Flanders' for a careful study of both pupil and teacher verbal patterns.

9. The teacher appraises the strengths and/or weaknesses of the total performance of the group.

Apart from pupils' analyses, the teacher considers the work of the entire group in such activities as class discussions, sharing of resource materials, and group dynamics. He seizes upon the findings to develop responsibility, leadership and participation of the members.

10. The teacher identifies the weaknesses of his planning and/or implementing and plans accordingly to overcome them.

Should the teacher find that not enough time was allowed for the amount of content or type of strategy used in teaching, he makes specific plans to adjust either or all factors. Finding that pupils' time is wasted with unnecessary instruction, the teacher may plan more pre-testing or diagnosis. If only part of a class needed instruction given, different grouping procedures may be planned. If pupils are not participating enthusiastically, the teacher may take more time for involving them in the original planning.

11. The teacher locates ideas and information which he can use to improve performance in specific instructional tasks.

> Regardless of the level of teaching performance, indications of potential improvement are constantly appearing. Every teacher knows how to contact the services of professional and commercial sources. Curriculum guides and materials offer suggestions for organization and learning activities. Professional journals are essential to keeping us with innovation. The teacher must be able to select that story, film, book, or machine that will best do a particular task. Use of library reference data is basic to the location of any information needed.

APPENDIX A

EXAMPLE: Pre-Teaching Tasks

Terms	Examples
Generalization from Discipline	A. "The simpler a culture is, the fewer are the materials and the narrower is the range of knowledge of which the inventor can be possessed, so that as a consequence the possibilities of invention are more limited." John M. Hofstrand: Social Science Generalizations for Use in the Social Studies: Creating Tools, Technics, and Social Studies in Elementary School as cited in John U. Michaelis, editor. 32nd Yearbook of the NCSS, p. 86, Number 40, 1962.
Lower order or child-size generalizations	B. 1. The environment can be used in different ways by different groups of people. 2. The more understanding a people have of their environment, the more choices they have as to how they will use their environment.
A Big Idea or Main Idea (possible)	C. Change in one aspect of life affects other aspects of living.
Key Concepts from the Original, lower order, and "Big Idea"	D. environment culture (groups, people) knowledge (understandings) inventor invention (choices) materials aspects of life
Content Samples	E. Plains Indians, Early Settlers

Functions

(It is assumed that the class has had similar experiences previously. Hence the class could be divided into two groups, with one handling the Plains Indians as indicated and another handling the early settlers in the Great Plains).

Cognitive skills: Cognitive Task I--Concept Development.

Academic Skills: Note-taking, use of index, table of contents, and card catalog.

Cognitive Skills: Discrimination--Locating relevant information.

F. Learning Experiences

1. Given the question: "What can you tell me about the way the Plains Indians used their environment?" the students are able to participate in a group discussion led by the teacher in which they list the items of information, group the items that go together (giving the basis for the grouping), and label the groups. (Teacher saves copy for use in learning experience 7.)

2. Given a variety of textbooks and trade books, within their reading ability, the pupils are encouraged to augment their information from other sources as well. Given a review of note-taking skills and procedures for using the index, table of contents, and card catalog, they are able to work independently in employing these skills to find and record, their information for the following questions:

a. What was the environment like?
   1. Weather
   2. Topography
   3. Chief vegetation
   4. Chief animal life
   5. Chief rivers
b. What were the homes like?
c. What did they use for food?
d. What did they use for clothing?
e. What work did they do?
f. What tools did they use?
g. What did they use for transportation?
h. What did they use for communication?
i. How were they governed?

Provision for individual differences:
   a. Reading ability
   b. Learning styles

Cognitive Skills:
   a. Discrimination of relevant information
   b. Verification

3. Given pictures, films, filmstrips, and recordings pertaining to the Plains Indians, the pupils are able to augment (and verify, at times) their information from other sources.

Cognitive Skills:
   a. Discrimination
   b. Analysis
   c. Synthesis

4. Given the following data retrieval chart, the students are able to record their information from learning experiences 2 and 3 above in the appropriate places.

(First part of a data retrieval chart used to facilitate recording and organizing information in preparation for later comparisons. Other columns will be added on for other content samples.

Preparation for Cognitive Task II--Interpretation of Data.)

Plains Indians	
Environment	
Homes	
Food	
Clothing	
Work	
Tools	
Transportation	
Communication	
Government	

Cognitive Skills
   a. Cognitive Task II--Interpretation of Data
   b. Summarizing generalization for content sample I (Verbal).

5. Given the above chart in a completed form the pupils are able to participate in a teacher-led discussion where they focus on the following question: "What can you say about effect of the environment on the ways in which they learned?" They are able to make inferences which go beyond the factual data they have located and are able to state several generalizations.

Functions (cont)

Generalizations in pictorial form. Provision for individual differences in learning style. (Visual)

Cognitive Skills:
Cognitive Task IV--Analysis and Evaluation

(If class is divided into two groups with the first engaged in learning experiences 1 - 7, the following learning experiences would be undertaken simultaneously with the second group. See assumption opposite learning experience 1.)

Cognitive skills: Cognitive Task I--
Concept Development.

Learning Experiences (cont.)

6. Given the preceding experiences, the pupils or group of them) are able to make a mural which illustrates the ways in which the Plains Indians were dependent on their environment.

7. Having completed the above learning experiences, the pupils are now able to compare their findings from learning experiences 2 - 7 with their initial impressions recorded in learning experience 1. They are able to point out the discrepancies reported in the initial experience, what the corrections should be, and give the data which supports the corrections indicated.

8. Given the question: "What can you tell me about the ways early settlers of the Great Plains used their environment?" The pupils are able to participate in a group discussion led by the teacher in which they list the items of information, group the items that go together (giving the basis for the grouping), and label the groups. (Teacher saves copy for use in learning experience 14.)

9. Given a variety of textbooks and trade books within their reading ability, the pupils are encouraged to augment their information from other sources as well. Given a review of note-taking skills and procedures for using the index, table of contents, and card catalog, they are able to work independently in employing these skills to find and record their information for the following questions:

Functions (cont.)

Cognitive Skills: Discrimination--Locating relevant information

Learning Experiences (cont.)

a. What was the environment like?
   1) Weather
   2) Topography
   3) Chief rivers
   4) Chief vegetation
   5) Chief animal life
b. What were the homes like?
c. What did they use for food?
d. What did they use for clothing?
e. What work did they do?
f. What tools did they use?
g. What did they use for transportation?
h. What did they use for communication?
i. How were they governed?

Provision for individual differences:
   a. Reading ability
   b. Learning styles

10. Given pictures, films, filmstrips, and recordings pertaining to the early settlers of the Great Plains, the pupils are able to augment (and verify, at times) their information from other sources.

(Second part of a data retrieval chart used to facilitate recording and organizing information in preparation for later comparisons. Other columns can be added for other content samples.)

Preparation for Cognitive T sk II--Interpret tion of Data.

11. Given the following data retrieval chart, the pupils are able to record their information from learning experiences 9 and 10 above in the appropriate places. (It is assumed that the data on the Plains Indians will have been reported earlier to the whole class by Group I and duly recorded. At this point Group II will make their report to the full class for recording in the second column ("Early Settlers').

Functions (cont.)

Learning Experiences (cont.)

11. Continued (Data Retrieval Chart)

	Plains Indians (from Group I)	Early Settlers (from Group II)
Environment		
Homes		
Food		
Clothing		
Work		
Tools		
Transportation		
Communication		
Government		

Cognitive Skills

a. Cognitive Task II--Interpretation of Data
b. Summarizing generalization for content sample II (Verbal).

12. Given the above chart in a completed form, the pupils are able to participate in a teacher-led discussion where they focus on the following question: "What can you say about the effect of the environment on the ways in which the settlers lived?" The pupils are able to make inferences which go beyond the factual data they have located and are able to state several generalizations.

Functions (cont.)

Generalizations in pictorical form. Provision for individual differences in learning style. (Visual)

Cognitive Skills:
Cognitive Task IV: Analysis and Evaluation

Cognitive Skills:
Cognitive Task II--Interpretation of Data
Making inferences
Making generalizations
Making generalizations on generalizations

Academic Skills: Note-taking, use of index, table of contents, and card catalog.

Cognitive Skills: Discrimination--locating relevant information, making inferences following analysis and synthesis.

(It is assumed that the pupils will have internalized the steps to this. If not, it is assumed the teacher will provide guidance necessary.

Learning Experiences (cont)

13. Given the preceding experiences, the pupils are able to make a mural which illustrates the ways in which the Plains Indians were dependent on their environment.

14. Having completed the learning experiences for numbers 8 - 13 above, the pupils are now able to compare their findings from learning experiences 9 - 13 with their initial impressions recorded in learning experience 8. They are able to point out the discrepancies reported in the initial experience, what the corrections should be, and give the data which supports the corrections indicated

15. Given the completed data retrieval chart suggested in learning experience 11 above, the pupils are able to participate in a teacher led discussion in which they are asked to compare the way in which the environment affected the life of the Plains Indians with the way it affected the life of the early settler. "What can you say about the ways the same environment is used by people with different backgrounds?" (Total class discussion).

16. Given the fact that before long a number of important inventions became available to settlers who lived in the Great Plains, (i.e. the steel plow, the Colt revolver, the reaper, and the windmill), and given the necessary reference materials, and given a column on the data retrieval chart for "later settlers," the pupils are able to record the appropriate data.

Functions (cont.)	Learning Experiences (cont.)
Cognitive Skills: Interpretation of data Making inferences Making generalizations	17. Given the completed chart including the data for both "early settlers" and "later settlers," the pupils are able to participate in a teacher-led discussion in which they are asked the question: "What changes did the inventions mentioned in experience 16 make in the way settlers of the Great Plains used the environment?"
Cognitive Skills: Cognitive Task III--Application of principles. Cognitive Task IV--Analysis and Evaluation.	18. Given the discussion in experience 17 as a background, the pupils are able to make inferences and generalize about the effects these changes on the Plains Indians and their use of the environment. They are able to cite support for their inferences and generalizations.
Cognitive Skills: Interpretation of data Making inferences Making generalizations Affective: Identifying conflicting values Identification of alternatives and possible consequences.	19. Given the idea that the changes in the original environment introduced by the settlers were threatening to the Indians and their ways of life with the result that fighting soon broke out between the Indians and the settlers, the pupils are able to participate in a teacher-led discussion dealing with the feelings of the indians and settlers, with the focal question: "To whom did the land belong?" followed by the use of the data retrieval chart suggested below:

	Indians	Settlers
a. Who owned the land?		
b. On what basis was it claimed?		
c. How was the matter settled?		
d. What might have been the result of each?		
e. How was each affected?		
f. What might have been the result of each?		
g. In what way was the actual settlement beneficial to each?		

Functions (cont.)	Learning Experiences (cont.)
Affective Ordering of values Choosing courses of action reflecting values assigned highest priority.	20. Given the foregoing experience as a background, the pupils are able to discuss the question "In the light of what you know today, what settlement of the conflict would you recommend?" identifying the values implicit in their proposals. Having identified the values, they can rank them in terms of importance and identify those settlements proposed which are consistent with the highest values.
Cognitive Skills: Generalization	21. Given the above experiences as a background, the pupils are able to summarize the effects of inventions on the lives of the settlers and of the indians. "What can you say bout the influence of inventions on the way people live?"
Inquiry session Application of Principles	22. Given a picture of fenced land in the Great Plains region, what changes would be likely to occur for settlers?
Cognitive Skills: Cognitive Task IV -- Analysis and Evaluation	23. Given the predictions of the pupils to experience 22 above, they are able to analyze their predictions in terms of adequacy of data to support them and in terms of the feasibility of the predictions for the people involved.
Cognitive Skills: Verification of hypothesis	24. Given the background of experience 23, above the pupils are able to verify their predictions from data on what actually took place secured from books, films, etc.

APPENDIX B

An Example of
THE TEACHING - LEARNING PROCESS

I. PRE-TEACHING TASKS:

(These are examples of Pre-Teaching Task #9)

Behavioral objectives for a short unit of study on the concept of "division of labor (about 4-5 lessons over 1 week.) 3rd grade.

1. The pupils will be able to give orally a definition of division of labor. This definition will include the following elements:
   a. more than one person is involved to make the product.
   b. each person makes a part and when all parts are put together the object is completed.
   c. each person makes the same part over and over.
2. The pupil will be able to conclude that working by dividing duties produces the product faster than making it by himself.
3. The pupils will discover as evidenced by their verbalization the idea of specialization, ioe., that by doing only one part of the whole many times, he will be able to do that part better than trying to do all parts well.
4. The pupils will write three objects or areas in which the concept of division of labor is used. All elements of the definition in (1) will be evident in the examples given.

II THE TEACHING-LEARNING ACT USING THE TRI-U SYNTHESIS MODEL

I. Determining the Focus

3. The Teacher will identify the task for the students. (details to be added).

Note: Students will learn the concept of "division of labor" through an inductive approach. A model of the "assembly-line" process will be compared with a group of individual craftsmen each of whom works alone to fashion the product. Since a pre-determined model will be used, the teacher has elected to bypass BC Task I (Concept Formation) temporarily, in order to generalize and make inferences about the model, BC Task II. The teacher will then return to Task I in order to label and define the concept "division of labor." This is an intended rotation of strategies.

II. Concept Formation

Given the generalizations developed in (II) based on the observations from the two groups, the students will be able to label and define the process involved (division of labor). (Note that "grouping," a part of BC Task I, was already accomplished in the pre-set model.)

Cognitive Task I

Teacher Activities:		
Tell me again how Group B made their product? Go over characteristics? What was the main difference?	Can we give this way of making things a name?	Concept: Division of Labor
Pupil Activities		
Listing	Labeling	

III. Generalizing and Making Inferences from Data

The teacher is able to select and organize appropriate learning activities in such a way that children will be able to identify appropriate points of data, explain, relate, and make inferences about the data, in order to formulate generalizations about the division of labor.

Cognitive Task II

Teacher Activities:
1. Organize class into 2 groups. Group A - Make product individually, Group B - Divide duties. (Equal number of children in each group.)
2. After several items are made, activity is stopped and a class discussion is conducted. How did the 2 groups make products?

1. Looking at chart, what happened here?

How do we know that what you say is true?

Developing Generalization: Division of Labor Faster Production

Pupil Activities: Identifying Points

Data Retrieval Chart

	Group A	Group B
Who did What?		
How Many?		
How Long?		

Interpreting How product was made to how made and the length of time it took.

Making inferences.

Cognitive Task III:

Teacher will be able to select and organize appropriate learning activities in such a way that children will be able to predict consequences and develop hypotheses, explain and support predictions and hypotheses, verify the predictions and hypotheses in order to apply principles to new situations.

Teacher Activities

Problem: Making school lunches. What would happen if one person made our lunches?	Why do you predict that this would happen? Are there other alternatives?	1. How should it be done? 2. How can we prove this?	Application of principle

Pupil Activities

Predicting Consequences Hypothesizing Example: It would probably take too long, she would make something very simple -- hot dog-- We would have no lunches.	Explaining, supporting predictions/hypotheses	1. List conditions 2. Visit cafeteria	Division of labor is used in making school lunches for faster production (and possibly application of other generalizations such as specialization.)

III. POST-TEACHING TASKS

The pre-teaching objectives listed on p. 1 will be evaluated by:

A. Children's verbal responses in classroom discussion as indicated in the behavioral objectives (#1,2,3).

B. Children's written responses in class assignment as indicated in behavioral objective #4.

C. Passing of an objective test (given below) at a 90/90 level.

Objective Test:

1. What was the main difference between the way Group A made the product and thw way Group B made it. (Select one)

   a. The colors of the paper were different.
   b. Group A had more people than Group B.
   c. The people in group A had to make the product all by themselves, whereas the people in group B made parts and put them together.

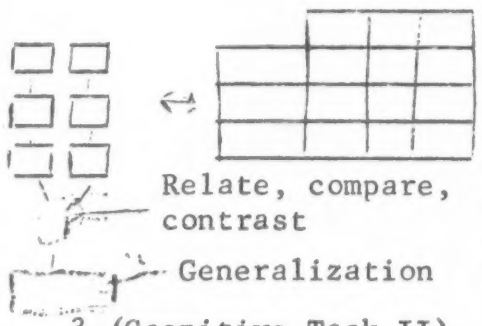
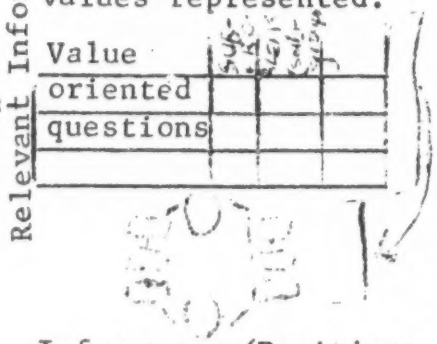
2. We call the way Group B made their product:

   a. Parts of a whole
   b. Division of labor
   c. Addition of labor
   d. None of the above

Etc.

APPENDIX C

SYNTHESIS MODEL OF THE TEACHING-LEARNING PROCESS RELATED TO ITS SOURCES

Structure-Inquiry Model[1]	Taba Model[2]	Michaelis - California Models[3]			Tri-U Synthesis Model
Level I, Type I	Cognitive Task I 1-What did you see? Note? Find? (enumeration) 2-What belongs together? On What criterion (grouping)? 3-What would you call these groups? What belongs under what (labeling)?	Analytic Mode 1-Observation 2-Classification 3-Definition	Integrative Mode 1-Observation 2-Classification 3-Definition	Policy-Making Mode	Determining the Focus 1-Stating a problem 2-Analyzing the setting 3-Identifying the task I Concept Formation A-Observation B-Grouping or classifying C-Labeling or defining
Level II Type I for comparison Type II for contrastive-analysis	Cognitive Task II 1-What did you note? See? Find? 2-Relating points to each other Data Retrieval Chart  Relate, compare, contrast Generalization 3-(Cognitive Task II) What does this mean? What would you conclude? "Accommodation, Taba, Piaget.	4-Contrastive Analysis 5-Generalization 6-Communication (Reading, tables, graphs, etc., translating from one language to another, such as from graphics to verbal language)	4-Comparison 6-Communication (Reading tables, graphs, etc. Translating from one language to another, such as from graphics to verbal language.	Assumes prior data from analytic mode & integrative mode 1-Given a problem, identify the sub-problems. 2-Identify alternative positions & values represented.  Inferences (Positions on value continua)	II-Generalizing & Making Inferences from data A-Comparing and Contrasting (differentiating) B-Interpreting C-Making inferences D-Developing Generalizations ↓ III-Added Dimension for Policy Making Identifying conflicting values implicit in the data and the inferences for different samples. Ordering of values according to PRIORITY Identification of alternatives. course of action

Level III If-Then	Cognitive Task III Application of principles - "What would happen if..?"	Omitted 7-Inference (Is this psychologically misplaced/)	Omitted 7-Inference (Should it be placed after step 5?)	4-Trial of solutions (alternatives available).	Iv-Application Eliciting of effects of alternative actions and the possible consequences.
Level LV Reflective Inquiry	Cognitive Task Iv Analysis & Evaluation: 1. Identify points 2. Considers possibility 3. Exanimes feasibility, desirability.	Evaluation 1. Replicable 2. Scientific fit	Evaluation 1. Believability 2. Significance (so what?)	5-Testing consequences of alternatives	V-Analysis and Evaluation Test of alternative course available.
				6-Deciding	(VI-Added Dimension for policy-making) Selecting a course of action consistent with values of highest priority.

Footnotes:

[1]See Appendix E below.

[2]Hilda Taba. Teachers' Handbook for Elementary Social Studies. (Palo Alto, California, Addison-Wesley, 1967).

[3]Adapted from the draft version of the California Statewide Framework for a New Social Science Curriculum. Authorized abridgement (1968 mimeo)

APPENDIX D

Cognitive Task IV

Analysis and Evaluation

Overt Activity	Covert Mental Operation	Eliciting Questions
1. Edentify Pcints	Discriminates regarding kinds of evidence available, extent of each kind.	What is the nature of the evidence? (Facts, inferences from facts, logical inferences--If-then)
2. Considers the possibility	Appraises adequacy of support data, number of samples from which it is drawn, adequacy of samples, logic of reasoning.	Is (the position) supported by data? How man samples bear it out? Does the syllogism hold? Are the necessary conditions available? Likely to be?
3. Examines the feasibility/ desirability	Evaluates in terms of operant forces evident: credibility, capability, dominant values, influence of power structure.	Is(the position) consistent with the criteria: e.g., temperament, social arrangements, economic conditions, etc? What changes are required? What problems of acceptance are indicated?

Note: This cognitive task can be combined with Cognitive Tasks II and II of Taba's model.

APPENDIX E

STRUCTURED INQUIRY

<table>
<tr><td>Levels</td><td></td><td></td></tr>
<tr><td>(Low)
1</td><td colspan="2">Random--Concept Development
Picture: Primitive Agriculture

What can you tell from the picture?</td><td>Type I: Map: Roseboro
What can you tell about Roseboro from the map map?
Type II:Development of some models: Central place, transportation, special purpose.</td></tr>
<tr><td>2</td><td colspan="2">Comparative--Interpretation of Data
Picture: (same place as--) Agriculture Then (primitive)
Picture: (same place as--) Agriculture Now ("modern")

Production chart: Then
Production chart: Now

How do you account for the imporance/significance of these two groups of data?

Emphasis on identification of principles, explaining; not on predictions, not on hypothesizing regarding new/novel situation. No alternative solutions, etc.</td><td>Type I: Map interpretation: Roseboro Then and Roseboro Now

What changes have occurred?
Why have they occurred?
How have they affected the people?

Type II: Comparison of categorical models, e.g. Central Place city with Transportation-Break of Bulk city.</td></tr>
<tr><td>3</td><td colspan="2">If-Then--Application of Principles
Picture: Present an agricultural scene from Non-Western (or early American) source.

If you introduced (a specified innovation) what changes would you expect? Why?</td><td>If you introduced (a specified condition) what changes would you expect?

If you were planning for an orderly development for (Roseboro) in 1980, given present trends, what would your plans for land-use be?
Transfer from categorical use of models by teacher to pupil use of models as a strategy</td></tr>
</table>

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Level	Reflection on the Process of Inquiry--Analysis and Evaluation	
4 (high)	Appraisal of question strategies with the pupils Questions used in a random search Questions that eliminated some of the randomness of the search--narrowed the focus Questions employed in a series by an individual to produce relevant information efficiently Questions that verified theories, tested hypotheses	This strategy can be used at all levels to increase efficiency. Note: These patterns are intended to serve as inquiry counterparts for the cognitive tasks. Thus the two systems can be rotated to enhance learning.